



PUBLIC HEALTH BULLETIN

VOLUME 17 NUMBER 6

DECEMBER 2005

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Cancer in South Dakota 2002

by Mynna Boodhoo Kightlinger, MSPH, South Dakota Cancer Registry Coordinator

The South Dakota Cancer Registry (SDCR) will release its 2002 annual report this month. Hard copies will be available from the Health Department at 605-773-3737 or online, www.state.sd.us/doh/Pubs2/Cancer2002.pdf. This article contains cancer incidence, stage at diagnosis, mortality and behavioral data. Major findings were:

Incidence 2002

- ✓ 3,864 South Dakotans were diagnosed with invasive, reportable cases of cancer. (This number excludes the less life-threatening cancers such as *in situ* except *in situ* bladders, and the common skin cancers.)
- ✓ Approximately 10 South Dakotans were diagnosed with cancer each day.
- ✓ More than half, 54%, of all new cancers were diagnosed in males and 46% were in females.
- ✓ Males had an age-adjusted incidence rate of 579.1 cases per 100,000 males, 38.8 percent higher than females with an age-adjusted rate of 417.1 cases per 100,000 females.

- ✓ Whites accounted for 92% of cases with 3,566 cases. American Indians accounted for 4.5% with 174 cases and other or unknown races were 5.5%.
- ✓ The American Indian age-adjusted incidence rate was 544.3 per 100,000 persons, which is 15.7% higher than the 470.4 rate among whites.
- ✓ The South Dakota age-adjusted incidence rate for 2002 was 484.9 cases, significantly higher than the U.S. SEER¹ rate of 458 cancers per 100,000 persons.
- ✓ The top five cancer sites accounted for 63% of all cancer cases.

Table 1: Top Five Cancers Diagnosed, South Dakota 2002

Site	No. Cases	Percent
Prostate	673	17.4%
Breast (female)	579	14.8%
Colorectal	509	13.2%
Lung & bronchus	444	11.5%
Bladder	214	5.5%

Source: South Dakota Department of Health

¹ SEER Surveillance Epidemiology and End Results
SEER Cancer Statistics Review, 1975-2002

Incidence 2001-2002

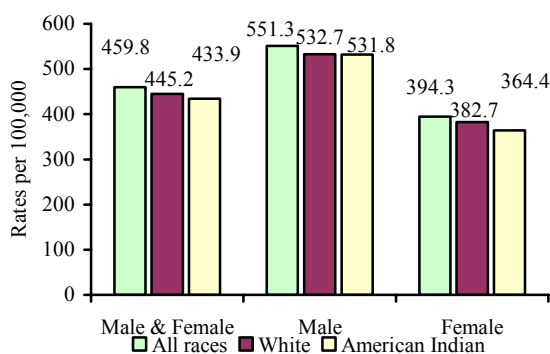
- ✓ Aggregated data for the two-year period 2001-2002 shows an age-adjusted incidence rate of 459.8 cases per 100,000 persons.

Table 2: Top Five Cancers by Race, South Dakota 2001-2002

	White	American Indian
Prostate	18%	15%
Breast (female)	16%	14%
Colorectal	12%	13%
Lung & bronchus	12%	11%
Bladder	5%	3%

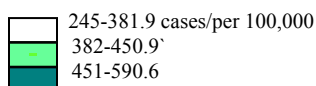
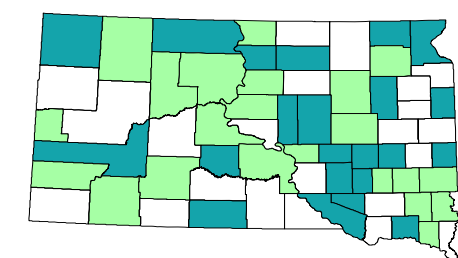
Source: South Dakota Department of Health

Figure 1: All Cancers, Age-Adjusted Incidence Rates by Race, South Dakota 2001-2002



Note: Rates are age-adjusted to the 2000 U.S. standard population
Source: South Dakota Department of Health

Figure 2: Cancer Age-Adjusted Incidence Rates by County, South Dakota 2001-2002

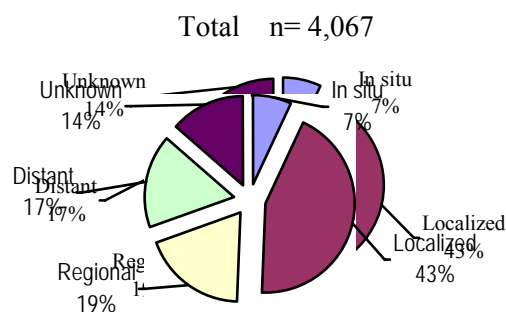


Rates are per 100,000 persons age-adjusted to the 2000 U.S. standard population
Source: South Dakota Department of Health

Stage at diagnosis 2002

- ✓ Fifty percent of all cancers in South Dakota were diagnosed at the early stages, *in situ* and localized stages.
- ✓ Thirty-six percent were diagnosed at the late stages, regional and distant.
- ✓ Both whites and American Indians had 17% of cases diagnosed at distant stages.
- ✓ By gender, both males and females had 48% of cases diagnosed at *in situ* and localized stages.

Figure 3: Stage at Diagnosis, All Sites, South Dakota 2002



Source: South Dakota Department of Health

Mortality 2002

Death rates measure the burden of cancer among the population.

- ✓ Overall, cancer was the second leading cause of death in South Dakota.
- ✓ Cancer has surpassed heart disease as the leading cause of death for persons under 85 years old.
- ✓ 1,562 South Dakotans died from cancer.
- ✓ Four South Dakotans died from cancer each day.
- ✓ Fifty-one percent, of all cancer deaths were males and 49% were females.
- ✓ Males had an age-adjusted death rate of 219.7 deaths per 100,000 males, 37% higher than females with an age-adjusted rate of 156.6 deaths per 100,000 females.

- ✓ South Dakota's death rate for 2002 was 181.9 deaths, lower than the U.S. SEER rate of 193.5 deaths per 100,000 persons.
- ✓ Whites accounted for 95% of deaths with 1,489 deaths and American Indians 4.5% with 70 deaths.
- ✓ The top five cancer sites causing death accounted for 56% of all cancer deaths.

Table 2: Top Five Cancer Deaths, South Dakota 2002

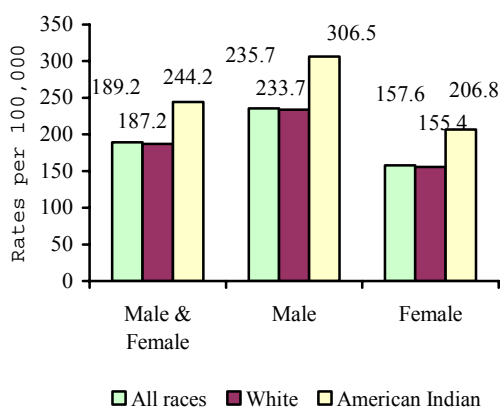
Site	Deaths	Percent
Lung & bronchus	399	25.8%
Colorectal	170	10.8%
Prostate	110	7 %
Breast (female)	109	7 %
Pancreas	86	5.4%

Source: South Dakota Department of Health

Mortality 1998-2002

- ✓ The age-adjusted death rate for 1998-2002 was 189.2 deaths, compared to a five-year U.S. SEER rate of 197.8 deaths per 100,000 persons.
- ✓ For the period 1998-2002, the American Indian age-adjusted death rate of 244.2 deaths per 100,000 was 30% higher than the white rate of 187.2 deaths per 100,000.

Figure 4: Age-Adjusted Death Rates, South Dakota 1998-2002

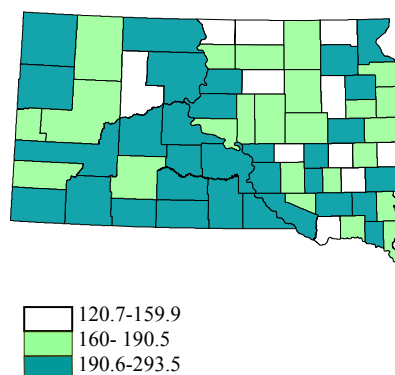


Note: rates are age-adjusted to the 2000 U.S. standard population
Source: South Dakota Department of Health

- ✓ American Indians had higher death rates than whites for the five-year period among both males and females.

- ✓ Eleven counties attained the Healthy People 2010 objective of 159.9 deaths per 100,000 persons (white on map).

Figure 5: All Sites Age-Adjusted Cancer Death Rates in South Dakota, 1998-2002



Notes: Healthy People 2010 Objective is 159.9 cancer deaths per 100,000 persons.
Rates are per 100,000 persons and age-adjusted to the 2000 U.S. standard population.
Source: South Dakota Department of Health

Trends in Mortality 1998-2002

- ✓ South Dakota's all sites combined cancer death rates fell by -4.8% from 1998 to 2002 with a percent change (PC) of -4.8 for males and -6.1 for females.
- ✓ The death rate fell by an annual percent change (APC) of -1.5 during 1998-2002 with an APC of -1.2 for males and -1.9 for females.
- ✓ The PC for whites was -4.6 and it was -4.2 for American Indians.
- ✓ The APC was -1.5 for whites and 0.5 for American Indians

Mortality/Incidence ratio (M/I)

- ✓ The mortality to incidence ratio (M/I) or case fatality overall was 0.4. It was 0.4 for both males and females.
- ✓ Liver and intra-hepatic bile duct cancers were by far the most lethal cancers with an overall M/I of 2.1. The M/I was 1.6 for males and 3 for females.
- ✓ Among gender related cancers, ovarian cancer was the highest for females with an M/I of 1.0, the third highest M/I overall in rank. For males, prostate cancer was 0.2 at the lower end of the ranking.

Years of potential life lost (YPLL), 2002, 1998-2002

YPLL measures the burden of a disease among younger populations.

- ✓ The cancer age-adjusted YPLL for South Dakota for 1998-2002 was 1,482 years/100,000 persons, the highest of all causes of deaths in the state.
- ✓ American Indians had the highest age-adjusted YPLL rate with 1,894 years for the five-year period, 1998-2005. The white rate was 1,469 years per 100,000 persons.
- ✓ The cancer YPLL was 9,977 years, the highest for all causes of deaths in 2002.
- ✓ Lung and bronchus cancers had the highest (not age-adjusted) YPLL with 2,295 years for whites and 139 years for American Indians in 2002.

Average Years of Life Lost (AYLL) 2002

- ✓ By rank, after childhood cancers, AYLL data shows that American Indians are dying at a much younger age than whites for many cancers.
- ✓ After childhood cancers, cervical cancer had the leading AYLL for 2002 for white women with 21.7 years and American Indian women with 53.0 years.

Early Detection for Screenable Cancers²

South Dakota's Behavioral Risk Factor Surveillance System (BRFSS) collects data regarding screening and early detection. Screening information for specific cancers is presented below along with Healthy People 2010 objectives.

Prostate cancer

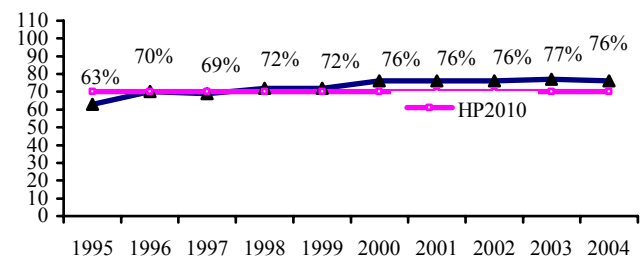
In 2004, 53% percent of men age 40 and over had a PSA within the past 2 years. The BRFSS has not included questions about prostate cancer for many years hence there are no trend data presented. In

addition, there are no Healthy People 2010 objectives for prostate cancer because there are no clear screening guidelines.

Breast cancer

South Dakota has achieved the Healthy People 2010 Objective of a 70% mammography screening rate. However, the rate has been essentially flat for the past five years.

Figure 6: Trends in Mammography Screening*, South Dakota 1995-2004

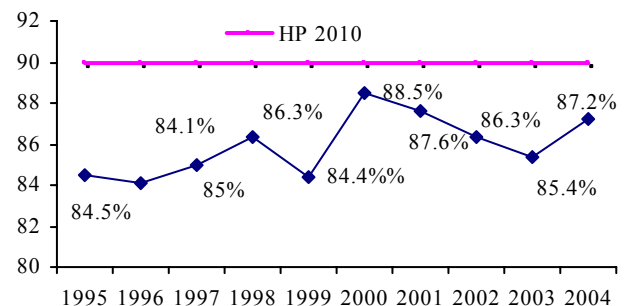


* Women age 40 and older

Cervical cancer

South Dakota has not achieved the Healthy People 2010 objective of 90% of women aged 18 and over receiving a Pap smear within the preceding three years.

Figure 7: Trends in Pap Screening* South Dakota 1995-2004



*Women with intact uterus aged 18 and over

Colorectal cancer

The Healthy People 2010 Objective 3-12 is that 50% of adults receive a fecal occult blood test (FOBT) within the preceding 2 years and that 50% of adults receive sigmoidoscopy or colonoscopy within the preceding 2 years.

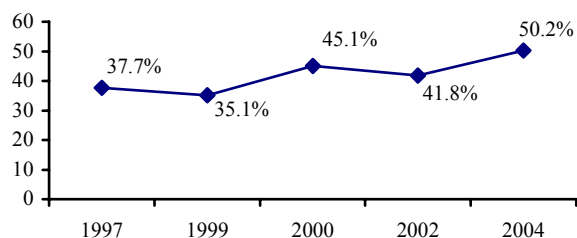
² Source <http://apps.nccd.cdc.gov/brfss/>

Accessed September 26, 2005

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In 2004, 24% of South Dakota adults aged 50 and older had a blood stool test.

Figure 8: Trends in Colorectal Cancer Screening,* South Dakota 1995-2004



*Percentage who ever had a sigmoidoscopy or colonoscopy. Approximately 62-65 % of those who were screened from 1999 -2004 were screened within the preceding two years of the survey.

Behavioral Risk Factors

Tobacco use, a diet high in fat and low in grains, and lack of exercise are risk factors for approximately 30% each of all cancers. The BRFSS tracks alcohol, tobacco, consumption of fruits and vegetables and physical activity. It also tracks socio-economic factors such as poverty and education. The following BRFSS data highlights these risk factors.³

Tobacco use

Current smokers – 20.8% of South Dakotans reported in 2004 that they currently smoke, a 10.5% decrease from 2003. The Healthy People 2010 Objective is 12% and the Health Department's 2010 Initiative is 18%.
Never smoked – 56% of respondents reported never smoking in 2004, a 7.6% increase from 2003.

Alcohol use

Binge drinking – 16.9% reported binge drinking in 2004, an 11% decrease from 2003. Binge drinking is 5 or more drinks on one occasion. The Healthy People 2010 Objective is 6%.

Heavy drinking – 3.7% of adults reported heavy drinking in 2004, a 22% decrease from 2003. This data measures men having

more than two drinks and women having more than 1 drink per day.

Physical activity

Eighty-one percent reported taking part in physical activity in 2004, a 3.4% increase from 2003.

Fruits and vegetables

In 2003, 20.3% of respondents ate ≥ 5 servings of fruits and vegetables per day.

Overweight/obesity⁴

In 2003, 21.2% of respondents were obese (i.e., BMI ≥ 30) and 39.4% were overweight (BMI 25-29.9.)

Health coverage

In 2004, 89.5% of respondents reported having health coverage in 2004, a slight increase from 88.3% in 2003.

Socio-economic factors

Income and high school graduation levels are the socio-economic factors usually correlated to health status. For example:

High school graduation – 65% of women who did not graduate from high school had mammograms in 2004 while 80.2% of those with college education had mammograms.
Income – 63% of those earning less than \$15,000 annually had mammograms compared to 80.4% of those earning $> \$50,000$ annually.

- ✓ In 2004, 9.4% of South Dakota households earned less than \$15,000 annually.
- ✓ Of those without a high school diploma, 28.5% earned less than \$15,000.
- ✓ Thirty-six percent earned between \$15,000 and \$29,999 annually.

³ <http://apps.nccd.cdc.gov/brfss/index.asp>

accessed 2 September 2005

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⁴ The Health Behaviors of South Dakotans 2003
South Dakota Department of Health

Pandemic Influenza Preparations

The recently released national HHS Pandemic Influenza Plan contains clinical guidelines for evaluation and management of patients during an influenza pandemic (Supplement 5).

The full plan is found at the national Pandemic website: www.pandemicflu.gov/

The clinical guidelines supplement is reprinted on the following pages. It can also be found on the web at <http://www.hhs.gov/pandemicflu/plan/pdf/S05.pdf>.

More information about South Dakota's pandemic influenza preparations, including a copy of the state's draft plan, can be found on the web at <http://flu.sd.gov/pandemic>.

South Dakota Department of Health - Infectious Disease Surveillance				
Selected Morbidity Report, 1 January – 31 November 2005 (provisional)				
	Disease	2005 year-to-date	5-year median	Percent change
Vaccine-Preventable Diseases	Diphtheria	0	0	na
	Tetanus	0	0	na
	Pertussis	159	7	+2171%
	Poliomyelitis	0	0	na
	Measles	0	0	na
	Mumps	0	0	na
	Rubella	0	0	na
	<i>Haemophilus influenza</i> type b	0	1	-100%
Sexually Transmitted Infections and Blood-borne Diseases	HIV infection	31	20	+55%
	Hepatitis B	4	2	+100%
	Chlamydia	2518	2009	+25%
	Gonorrhea	314	259	+21%
	Genital Herpes	321	298	+8%
	Syphilis, primary & secondary	1	0	na
Tuberculosis	Tuberculosis	14	13	+8%
Invasive Bacterial Diseases	<i>Neisseria meningitides</i>	4	2	+100%
	Invasive Group A <i>Streptococcus</i>	21	16	+31%
Enteric Diseases	<i>E. coli</i> O157:H7	26	40	-35%
	Campylobacteriosis	237	169	+40%
	Salmonellosis	143	116	+23%
	Shigellosis	66	16	+313%
	Giardiasis	107	82	+30%
	Cryptosporidiosis	29	38	-24%
	Hepatitis A	1	3	-67%
Vector-borne Diseases	Animal Rabies (provided through Oct.)	60	87	-31%
	Tularemia	8	5	+60%
	Rocky Mountain Spotted Fever	5	2	+150%
	Hantavirus Pulmonary Syndrome	2	0	na
	Lyme disease (imported)	2	1	+100%
	West Nile Virus disease (cases & other)	300	51	+488%
Other Diseases	<i>Streptococcus pneumoniae</i> , drug-resistant	3	4	-25%
	Legionnaires' disease	19	3	+533%
	Additionally, the following diseases were reported: Bacterial Meningitis, non-meningococcal (17), Botulism, wound (1); chicken pox (128); <i>E. coli</i> , shigatoxin-producing, non -0157:H7 (3); Hemolytic Uremic Syndrome (3); MRSA, invasive (42); <i>Staphylococcal</i> Toxic Shock Syndrome (1); <i>Streptococcal</i> Toxic Shock Syndrome (1); Q fever (1); Yersiniosis (1)			

Communicable diseases are obligatorily reportable by physicians, hospitals, laboratories, and institutions.

The **Reportable Diseases List** is found at www.state.sd.us/doh/Disease/report.htm or upon request.

Diseases are reportable by telephone, mail, fax, website or courier.

Telephones: 24 hour answering device 1-800-592-1804; for a live person at any time call 1-800-592-1861; after hours emergency 605-280-4810. **Fax** 605-773-5509.

Mail in a sealed envelope addressed to the DOH, Office of Disease Prevention, 615 E. 4th Street, Pierre, SD 57501, marked "Confidential Medical Report". **Secure website:** www.state.sd.us/doh/diseasereport.htm.